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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent application of:

Applicant: Dieter Dohring
Serial No.: 09/647,130
Filing Date: March 5, 2001
Title: METHOD OF PRODUCING LAMINATE COATINGS, AND
LAMINATE COATING
Examiner: Justin R. Fischer
Art Unit: 1733
Docket No. TURKP0113US

APPELLANT'S APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

On behalf of the appellant, the undersigned submits this brief for the Board's consideration of the appeal of the Examiner's decision dated April 26, 2004, finally rejecting claims 1-8 of the above-identified application. A credit card payment form covering the fee for filing an appeal brief is attached.

I. Real Party in Interest

The real party in interest in the present appeal is Kronospan Technical Company Ltd.

11/02/2004 YPOLITE1 00000044 09647130

01 FC:1402 340.00 OP

11/02/2004 YPOLITE1 00000044 09647130

02 FC:1251 110.00 OP

II. Related Appeals and Interferences

Neither appellant, appellant's legal representative, nor the assignee of the present application are aware of any appeals or interferences which will directly affect, which will be directly affected by, or which will have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1- 8 are pending, stand finally rejected, and are the subject of this appeal. A copy of these claims is reproduced in the hereto appended Claims Appendix.

IV. Status of Amendments

There are no outstanding amendments.

V. Summary of Claimed Subject Matter

The claimed subject matter relates to a process for producing laminate coatings that have particular application to flooring materials such as floor tiles. More particularly, the laminate coatings can be applied to plywood sheets or fibre tiles.

The process comprises the steps of: (a) taking a wet patterned or decorative paper impregnated with a melamine resin [3/18-20¹; 7/6-7]; (b) spreading particulate fine aluminum oxide (corundum) onto the still wet paper before drying to pre-treat said paper [3/18-20; 7/8-9]; (c) pre-drying or pre-condensing said paper [4/21-22; 7/10]; applying a covering layer of fibre material containing melamine resin onto said pre-

¹ Page number/line number(s) of the specification.

treated paper [3/18-21; 7/11-12]; and (d) finally drying the whole [4/26-27; 7/13], with the covering layer being transparent for viewing of the patterned or decorative paper [3/18-21].

VI. Grounds of Rejection to Be Reviewed on Appeal

- A. Claims 1 and 5-7 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,940,503 (*Lindgren*).
- B. Claims 1, 2 and 5-8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,940,503 (*Lindgren*) in view of U.S. Patent No. 3,663,341 (*Veneziale*).
- C. Claims 3 and 4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,940,503 (*Lindgren*).

VII. Argument

The above set forth grounds of rejection should be reversed at least for the below set forth reasons.

A. Rejection of Claims 1 and 5-7 under 35 U.S.C. 102(b)

Claims 1 and 5-7 stand rejected as being anticipated by *Lindgren*. *Lindgren* discloses a process for the production of a decorative thermosetting laminate with an abrasion-resistant surface layer. According to *Lindgren*, a continuous paper is impregnated with a thermosetting resin such as melamine-formaldehyde resin. At least one side of the paper is coated with small, dry and hard particles evenly distributed over the whole wet surface of the resin on the continuous paper. The resin is dried,

whereupon the particle-coated impregnated paper, or prepreg, is cut as needed and placed as a surface layer on a base layer and bonded thereto.

According to **Lindgren**, the hard particles can be applied to overlay paper or to a decor paper.

The particle coated paper sheet often consists of a so-called overlay paper, preferably of α -cellulose. However, instead it is also possible to apply the hard particles to the so-called decor paper.

Lindgren, column 2, lines 26-29. If an overlay paper is used, the particle-coated paper sheet can be used in a conventional manner as an overlay sheet. If a decor paper is used, the particle-coated paper sheet can then be used in a conventional manner as a decorative sheet applied to a base layer in a conventional manner.

Lindgren goes on and indicates that the particle-coated sheet can have put thereon a conventional overlay sheet which is not coated with particles.

Sometimes you can coat both the overlay paper and the decor paper with particles or use two or more such particle coated overlay papers. It is also possible to put a conventional overlay sheet, which is not coated with particles, over the particle coated sheet or sheets. (emphasis added)

Lindgren, column 2, lines 31-34. **Lindgren** does not provide any further specifics on how this is to be accomplished.

Turning now to claims 1 and 5-7, the therein recited process comprises, *inter alia*, the step of applying a covering layer of fibre material containing melamine resin onto said pre-treated paper. According to the Examiner, a conventional overlay sheet constitutes a covering layer of fibre material. More particularly, the Examiner has taken the position that the original disclosure does not provide a specific meaning to "a covering layer of fibre material" that would distinguish it from the overlay sheet of **Lindgren**. A specific meaning, however, is not needed as resort to a dictionary

provides adequate distinction between a fibre material and the prior art overlay sheet.

Webster's Revised Unabridged Dictionary, © 1996, 1998 provides the following

definition of fibre/fiber:

fiber (\Fi"ber\, Fibre \Fi"bre\,, n. [F. fibre, L. fibra.])

1. One of the delicate, threadlike portions of which the tissues of plants and animals are in part constituted; as, the fiber of flax or of muscle.
2. Any fine, slender thread, or threadlike substance; as, a fiber of spun glass; especially, one of the slender rootlets of a plant.
3. Sinew; strength; toughness; as, a man of real fiber.

Yet had no fibers in him, nor no force. --Chapman.

4. A general name for the raw material, such as cotton, flax, hemp, etc., used in textile manufactures.

Fiber gun, a kind of steam gun for converting, wood, straw, etc., into fiber. The material is shut up in the gun with steam, air, or gas at a very high pressure which is afterward relieved suddenly by letting a lid at the muzzle fly open, when the rapid expansion separates the fibers.

Fiber plants (Bot.), plants capable of yielding fiber useful in the arts, as hemp, flax, ramie, agave, etc.

The paper overlay sheet of **Lindgren** does not meet the definition of a fiber material.

Therefore, for at least this reason, claims 1 and 5-7 are not anticipated by **Lindgren**.

B. Rejection of Claims 1, 2 and 5-8 under 35 U.S.C. 103(a)

Claims 1, 2 and 5-8 stand rejected as being unpatentable over **Lindgren** in view of **Veneziale**. According to the Examiner, **Lindgren** describes the use of a "conventional" overlay in combination with a particle-treated decorative sheet in the manufacture of a decorative laminate. The Examiner concedes that **Lindgren** does not disclose or suggest the use of a fibre fleece as set forth in claim 2, but contends such

use would have been obvious in view of **Veneziale** which is cited for the proposition that it is well known in the decorative lamination industry that top sheets or overlays can have a variety of forms, including fibrous webs or layers. The Examiner further contends that it is well recognized that fibre fleeces are a common form of fibrous web or layer.

Claims 1 and 5-8

As will become apparent from the following remarks, the Examiner has not established a *prima facie* case of obviousness of claims 1 and 5-8. First, **Lindgren** does not teach the use of a conventional overlay as contended by the Examiner, but rather the use of a conventional overlay sheet.

Sometimes you can coat both the overlay paper and the decor paper with particles or use two or more such particle coated overlay papers. It is also possible to put a conventional overlay sheet, which is not coated with particles, over the particle coated sheet or sheets.

Lindgren, column 2, lines 31-34. The overlay sheets described by **Lindgren** are paper sheets. As discussed above, a paper sheet is not a fiber material.

Regarding the use of fiber material and more particularly fiber fleece (claim 2) the Examiner looks to **Veneziale** as evidence of the variety of well-known forms that are suitable for the top (overlay) sheet, including a mat or fibre fleece, and hence a fiber material. First it is noted that **Veneziale** is concerned with overlay layers made of fiber glass, whereas **Lindgren** makes no reference to the use of fiber glass as an overlay.

In addition, it is submitted that the skilled person would not have been motivated to modify the methodology of **Lindgren** in view of **Veneziale**. **Lindgren** recognized a

need to improve the abrasion resistance of the laminates exposed to an extreme abrasion. **Lindgren** observed as follows:

It has been tried before to improve the abrasion resistance of these laminates by addition of small, hard particles for instance of aluminum oxide already at the production of the overlay paper of α -cellulose. Then the particles have been spread over a layer of wet α -cellulose fibers on the wire of a paper machine.

With this method, the particles are distributed more or less irregularly within the whole fibre layer. Some of these particles even pass through the wire. Thus, in the overlayer paper obtained the hard particles will be distributed in an uncontrollable way. It is impossible by this known method to get an even distribution of the hard particles on the surface of the paper, where they give the best effect against abrasion.

In other words, the laminates obtained containing such an overlay sheet will get an uneven quality regarding abrasion resistance.

Lindgren, column 1, lines 38-54. Recognizing the foregoing problem, **Lindgren** devised a way to avoid the above mentioned problem. As stated by **Lindgren**:

So far it has not been possible to avoid the above mentioned problem in a satisfactory way. However, according to the present invention it has quite unexpectedly been possible to solve the above problem and bring about a process for the production of a decorative thermosetting laminate with an abrasion-resistant surface layer, which laminate comprises paper sheets impregnated with a thermosetting resin. A continuous paper is then impregnated with a thermosetting resin such as melamine-formaldehyde resin. At least one side of the continuous paper is coated with 2-20 g/m², preferably 3-12 g/m² of small, dry and hard particles evenly distributed over the whole wet surface of resin on the continuous paper. Thereafter the resin is dried and the particle coated, impregnated paper, so-called prepreg is possibly cut to sheets. At least one such sheet or continuous layer is placed as a surface layer on a base layer and bonded thereto.

Lindgren, column 1, line 58 through column 2, line 7. In addition, **Lindgren** taught:

The particle coated paper sheet often consists of a so-called overlay paper, preferably of α -cellulose. However, instead it is also possible to apply the hard particles to the so-called decor paper.

Sometimes you can coat both the overlay paper and the decor paper with particles or use two or more such particle coated overlay papers. It is also

possible to put a conventional overlay sheet, which is not coated with particles, over the particle coated sheet or sheets.

Lindgren, column 2, lines 26-35.

Veneziale, filed almost 20 years prior to **Lindgren**, has nothing to do with the problem addressed by **Lindgren**, i.e., the uneven distribution of wear-enhancing hard particles in a decorative laminate. The skilled person would not view **Veneziale** as having anything to add to the teachings of **Lindgren** in respect of the formation of a decorative laminate containing hard particles. Perhaps more importantly, **Veneziale** offers no hint that any of the other overlay materials (fiber glass in various forms) mentioned by **Veneziale** could be successfully employed in the process of **Lindgren**. There simply is lacking any suggestion or modification to modify **Lindgren** as contended by the Examiner. The only guidance arises from applicants' specification, and hindsight reliance thereon is clearly improper.

Perhaps it should be mentioned that **Lindgren** discloses a protecting layer other than a paper sheet. Such protecting layer, however, is composed of pulverized α -cellulose.

According to the invention, it is possible to avoid handling overlay sheets by coating the decor sheet both with hard particles and pulverized α -cellulose impregnated with thermosetting resin such as melamine-formaldehyde resin. The coating can then be applied in one step or in two separate steps. The pulverized α -cellulose will form a protecting layer on top of the decor sheet.

Lindgren, column 2, lines 49-55. Again, there is no suggestion of using a fiber material.

Moreover, it is not at all clear from **Lindgren** how the decor sheet is to be coated with the hard particles and pulverized α -cellulose impregnated with thermosetting resin. **Lindgren** states such coating can be applied in one step or in two steps, but no details

are provided. Consequently there is lacking any suggestion of the steps of a) taking a wet patterned or decorative paper impregnated with a melamine resin; b) spreading particulate fine aluminum oxide (corundum) onto the still wet paper before drying to pre-treat said paper; c) pre-drying or pre-condensing said paper; d) applying a covering layer of fibre material containing melamine resin onto said pre-treated paper; and e) finally drying the whole, with the covering layer being transparent for viewing of the patterned or decorative paper.

Claim 2

The above comments regarding ***Lindgren*** and ***Veneziale*** are even more pertinent to claim 2 which further defines the fiber material as a fiber fleece. The Examiner concedes there is no disclosure or suggestion of a fiber fleece in ***Lindgren***. Regarding ***Veneziale***, there is mention of a mat, but no reference to a fibre fleece. Thus, the combination of ***Veneziale*** and ***Lindgren***, even if permissible, does not yield the subject matter of claim 2.

The difference between the subject matter of claim 2 is even more evident from a comparison of a conventional overlay sheet appended hereto as Exhibit A and the fibre fleece material appended hereto as Exhibit B.²

C. Rejection of Claims 3 and 4 under 35 U.S.C. 103(a)

Claims 3 and 4 stand rejected as being obvious in view of ***Lindgren***.

² These exhibits should be of record in this case. They were previously submitted with applicant's reply filed on March 29, 2004, per the attached copy (Exhibit C) of a return postcard acknowledging their receipt.

Claim 3

Claim 3 calls for spreading on the decorative paper aluminum oxide or corundum having a particle size of about 125 μ -m. The Examiner concedes that there is disclosure in ***Lindgren*** of such particle size, but contends that skilled person "would have readily appreciated the inclusion of particles having a particle size of 'about 125 micrometers' since the range of ***Lindgren*** suggests particle sizes greater than and below 80 micrometers, it being further noted that the original disclosure fails to expressly define the range suggested by 'about 125 micrometers'." Addressing the last comment first, the alleged failure and its relevance as to what ***Lindgren*** would fairly suggest to the skilled person is not understood. Pending claim 3 is an original claim and thus the original disclosure clearly and expressly set forth a particle size of about 125 micrometers. Moreover, whether or not such range was set forth in original claim 3 is of no moment as to what ***Lindgren*** suggests to the skilled person.

Turning now to what ***Lindgren*** teaches and suggests, the pertinent passage of ***Lindgren*** is as follows:

The hard particles can consist of many different materials. It is especially suitable to use silica, aluminum oxide, and/or silicon carbide. Accordingly, a mixture of two or more materials is possible. The size of the particles is important for the final result. If the particles are too big, the surface of the laminate will be rough and unpleasant. On the other hand, too small particles can give too low abrasion resistance. Suitably the average particle size is about 1-80 μ m, preferably 5-60 μ m.

Lindgren, column 2, lines 56-64. In addition to directing the skilled person to a particle size of about 1-80 μ m and preferably 5-60 μ m, ***Lindgren*** tells the skilled person that if the particles are too big, the surface of the laminate will be rough and unpleasant. Thus, if anything, ***Lindgren*** teaches away from the use of particle sizes of about 125 μ m. Such particle size, however, is desirable in the practice of applicant's invention

whereas they are undesirable when producing laminate coatings according to the teachings of **Lindgren**, which production method is different from that taught by applicant as discussed above.

Claim 4

Claim 4 calls for the density of the coated decorative paper after drying to be about 140 to 150 g/m². The Examiner concedes that **Lindgren** does not disclose such area density, but instead discloses in an example a decor paper having an area density of 80 g/m². The Examiner argues that the skilled person "would have readily appreciated a surface weight for the decor paper of between 140 and 150 grams per square meter, there being no conclusive evidence of unexpected results to establish a criticality for such a surface weight." It is respectfully submitted that evidence of unexpected results is not necessary to rebut the Examiner's contention of obviousness, given that the Examiner has not established a *prima facie* case of obviousness.

Lindgren lacks any guidance as to the claimed range. The Examiner contends that such range can be extrapolated from **Lindgren**, but the Examiner also points out that a number of factors will impact the dried area density of a coated decorative paper. If the latter is true, then there is lacking any reasonable way for the skilled person to extrapolate the claimed range from the teachings of **Lindgren**. Accordingly, the Examiner's reasoning is internally inconsistent.


VIII. Conclusion

For at least the foregoing reasons the rejections should be reversed.

In the event any fee or additional fee is due in connection with the filing of this paper, the Commissioner is authorized to charge those fees to our Deposit Account No. 18-0988 (under the above Docket Number). In the event an extension of time is needed to make the filing of this paper timely and no separate petition is attached, please consider this a petition for the requisite extension and charge the fee to our Deposit Account No. 18-0988 (under the above Docket Number).

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

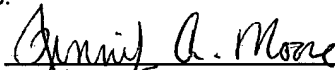
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CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper or thing referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: October 29, 2004


Jennifer A. Moore

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Claims Appendix

1. A process for producing laminate coatings comprising the steps of:
 - a) taking a wet patterned or decorative paper impregnated with a melamine resin;
 - b) spreading particulate fine aluminum oxide (corundum) onto the still wet paper before drying to pre-treat said paper;
 - c) pre-drying or pre-condensing said paper;
 - d) applying a covering layer of fibre material containing melamine resin onto said pre-treated paper; and
 - e) finally drying the whole, with the covering layer being transparent for viewing of the patterned or decorative paper.
2. Process according to Claim 1, wherein said fibre material is a fibre fleece.
3. Process according to Claim 1, wherein aluminum oxide or corundum having a particle size of about 125 $\mu\text{-m}$ is spread on the decorative paper.
4. Process according to Claim 1, wherein the density of the coated decorative paper after drying amounts to about 140 to 150 g/m^2 .
5. Process according to claim 1, wherein the aluminum oxide is spread in a quantity of about 20 g/m^2 .
6. Process according to claim 1, wherein the aluminum oxide is spread in a quantity of about 8 g/m^2 .
7. Process according to Claim 1, wherein said fibre material includes cellulose fibres.
8. Process according to Claim 1, wherein said fibre material includes glass fibres.

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Examiner:	Justin R. Fischer
Art Unit:	1733
Docket No.	TURKP0113US

EXHIBIT A

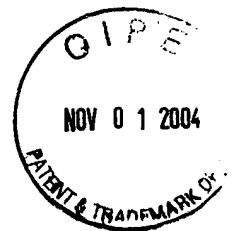
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EXHIBIT B

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
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Title: METHOD OF PRODUCING LAMINATE COATINGS, AND
LAMINATE COATING

Examiner: Justin R. Fischer
Art Unit: 1733

Docket No. TURKP0113US

EXHIBIT C

Applicant <u>09/647,130</u>		Case No. <u>TURKP0113US</u>
Serial No. <u>09/647,130</u>	Filing Date <u>3/23/04</u>	Atty <u>DWB</u>
Title _____		
Mailed <u>3/23/04</u>	Due Date <u>3/23/04</u>	Ex. Mail No. _____
() Patent Application (<input type="checkbox"/> New <input type="checkbox"/> CON <input type="checkbox"/> DIV <input type="checkbox"/> CIP <input type="checkbox"/> CPA <input type="checkbox"/> PCT <input type="checkbox"/> Provisional)		
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() Trademark/Service App.		
<input type="checkbox"/> Specimens <input type="checkbox"/> St. of Use	() Checks \$ _____ \$ _____	
<input checked="" type="checkbox"/> Other <u>Exhibits A + B</u>		

RECEIPT ACKNOWLEDGED